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Cotton Fiber and Processing Test Results

CROP of

1976



Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 January 14, 1977

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.^{1/} These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

^{1/} Summary of Cotton Fiber and Processing Test Results, Crop of 1975,
USDA, AMS, Cotton Division, May 1976.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1976

Discussion of Test Results

Short staple cottons tested through January 7 from the Southwestern Area are longer, coarser and weaker than last year, according to the Cotton Division, Agricultural Marketing Service, USDA. Shirley Analyzer nonlint content is lower, while picker and card waste is higher than a year ago. Yarns spun from these samples are weaker but have fewer imperfections. Spinning potential yarn number is a little lower.

Average test results for all medium staple samples tested show slightly shorter and stronger fibers than a year ago. Shirley Analyzer nonlint content is lower, but picker and card waste is higher. Yarns spun from these samples are stronger and have fewer imperfections compared to a year ago at this time. Yarn appearance is slightly lower as is the spinning potential.

Medium staple samples tested from the Southeast show fibers to be slightly longer, more uniform, coarser and stronger than a year earlier. Shirley Analyzer nonlint content is slightly lower. Yarns spun from these samples are stronger with fewer imperfections. Average spinning potential is higher.

South Central medium staple samples tested are longer, less uniform and slightly finer than a year ago. Samples are stronger at zero gage tests. Shirley Analyzer nonlint content is lower, while picker and card waste is higher than a year ago. Yarn skein strength is slightly stronger and imperfections are fewer than a year earlier. Spinning potential is lower.

Southwestern medium staple samples tested are coarser and more uniform than a year earlier. Shirley Analyzer nonlint content is lower, while picker and card waste is higher than a year ago. Yarns have a higher appearance index and fewer imperfections.

Medium staple samples from the West have slightly shorter and weaker fibers than a year ago. Picker and card waste is higher than a year ago. Yarns spun from these samples are weaker and have lower appearance grades. Yarn imperfections are fewer. The spinning potential yarn number is lower.

Long staple samples tested through January 7 this season are longer, more uniform and coarser than a year earlier. Fiber strength is about the same as last season. Shirley Analyzer nonlint content and manufacturing waste are lower this season. Yarns spun from these samples are stronger and have fewer imperfections. The spinning potential yarn number is slightly higher than it was last season.

Long staple cottons tested from the Southeast are longer and more uniform than a year ago. Fibers are coarser and stronger. Shirley Analyzer nonlint content, picker and card waste, and comber waste are all lower than last season. Yarn quality is better than a year ago.

No additional long staple lots were received from the South Central Area during this test period.

Long staple samples from the Far West have longer, more uniform and slightly coarser fibers than in the previous season. Shirley Analyzer nonlint content and picker and card waste are higher than a year ago but comber waste is lower. Yarn strength is higher. Yarns have about the same appearance grades as last season but fewer imperfections. The spinning potential yarn number is much higher.

American Pima extra long staple samples tested through January 7 this season have about the same length, strength and mike properties as a year earlier. Picker and card waste and comber waste are both lower than last season. Yarns spun from these samples have about the same quality characteristics as a year ago.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through January 7, 1977 1/

Staple group Area, and Crop year	Fiber test results										Processing test results				
	Lots tested	Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.			
		2.5% span	50/2.5 unif.		Pct.	Rdg.			Mpsi	G/tex	Pct.		Yarn quality		
													Zero gage	1/8" gage	
															Skein str.
No.	Inches	Pct.	Rdg.	Mpsi	G/tex	Pct.	Lbs.	Index	No.	Yarn No.					
Short Staple:															
Southwest															
1975	53	.94	45	3.6	86	21	4.0	6.7	97	107	20	42			
1976	54	.96	45	4.3	84	21	3.4	7.0	89	110	14	40			
Medium Staple:															
Southeast															
1975	43	1.07	44	4.2	83	22	3.4	6.3	97	97	25	53			
1976	48	1.08	45	4.6	85	23	3.2	6.3	106	98	20	57			
South Central															
1975	114	1.10	45	4.3	85	23	3.1	5.7	105	101	21	59			
1976	122	1.08	44	4.2	88	23	2.7	6.3	107	99	17	55			
Southwest															
1975	34	1.06	43	3.7	83	22	3.7	6.2	103	87	32	56			
1976	37	1.06	45	4.0	82	22	3.4	6.7	103	93	24	55			
West															
1975	68	1.12	45	4.1	92	26	2.3	5.5	124	93	23	69			
1976	70	1.11	45	4.2	89	25	2.2	5.8	119	89	19	66			
U.S. Average															
1975	259	1.09	45	4.2	86	23	3.1	5.8	108	97	23	60			
1976	277	1.08	45	4.2	87	24	2.8	6.2	110	95	19	58			
Significant dif- ference 2/															
		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3			

1/ Based on a limited number of samples of modal quality
2/ Minimum differences considered to be significant for comparisons in this table.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through January 7, 1977 1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results									
		Length		Mike	Strength		SA Non- lint	P&C Waste	Comber Waste	Yarn Quality				SPY			
					Span	Unif				Zero	1/8" gage	Strength carded	Appearance carded		Imprfctns card	comb	
		In.		Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Lbs.	Indx	Indx	No.	No.	No.		
		No.									22s	Carded & Combed	Yarn				
Long Staple: Southeast																	
	17	1.09	43	4.2	85	23	3.7	9.6	18.8	91	115	110	119	20	10	54	
	12	1.14	45	4.4	86	25	3.1	6.7	15.8	115	136	104	116	20	8	66	
South Central																	
	6	1.11	43	4.0	88	23	3.8	9.2	18.1	104	125	110	120	19	9	62	
	3	1.12	42	3.7	91	26	3.4	6.8	20.3	109	137	97	103	13	10	57	
West																	
	17	1.16	45	3.3	93	26	3.1	8.7	16.1	138	158	82	96	39	22	89	
	5	1.19	46	3.4	87	27	4.0	9.1	13.4	144	166	84	94	35	16	105	
U.S. Average																	
	40	1.13	44	3.8	89	24	3.5	9.2	17.6	113	135	98	109	28	15	70	
	20	1.15	45	4.0	87	26	3.3	7.3	15.9	121	143	98	108	23	11	74	
Extra Long Staple: West																	
	9	1.47	31	3.7	104	34	2.8	7.5	18.4		67		111		2		
	16	1.48	31	3.6	102	34	2.6	6.7	15.8		65		111		2		
Significant Difference 2/																	
		0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	4(22s)	5	5	2	2	3	

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification				Fiber Test Results										Processing Test Results - Carded Yarns										
Sample Number Grade Name & Code				Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent-ial	
				2.5% span	Unif		Zero Gage	1/8" Gage		Pct	Pct	Gra	Yel		8s or 74 tx	22sor 27 tx	Lbs	Pct	8s or 74 tx	22sor 27 tx	No	No		8s or 74 tx
No				32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Pct	Pct	No	No	No	No	No	No	
SOUTHWEST AREA																								
NORTHWEST TEXAS																								
ANSON																								
2	LM LT SP	52	32	0.97	47	4.2	79	20	8.1	LANKART 611	4.6	3	3	7.6	100 PERCENT	284	93	7.3	6.4	120	100	44	24	46
3	LM LT SP	52	31	0.94	45	3.8	79	21	7.6		4.9	3	3	7.1		274	88	7.3	6.4	120	100	41	20	41
BURKBURNETT																								
3	SLM LT SP	42	32	0.98	47	5.2	86	21	6.8	LANKART LX571	2.6	2	3	6.2	100 PERCENT	282	90	6.8	5.6	120	110	19	12	40
HART																								
3	MID SP	33	30	0.91	44	3.4	89	22	7.1	STRIPPER 31	3.3	3	5	7.1	80 PERCENT	285	93	7.1	6.0	130	110	22	14	43
LOCKNEY																								
3	LM LT SP	52	32	0.97	45	3.1	82	22	6.8	MRCOT M70	5.7	3	4	6.9	80 PERCENT	313	106	7.5	6.5	120	110	36	20	56
LORENZO																								
2	MID SP	33	32	1.00	44	3.1	81	22	7.7	PAYMASTER 909	3.0	3	5	6.1	90 PERCENT	303	100	8.1	6.9	130	110	26	11	54
3	SLM SP	43	32	0.98	44	3.0	76	22	7.9		3.8	3	5	6.0		299	100	8.5	7.1	120	110	28	15	54
LUBBOCK																								
2	LM LT SP	52	32	1.00	44	3.1	80	22	7.4	PAYMASTER 909	3.3	3	5	7.3	75 PERCENT	304	99	8.3	6.9	120	90	35	19	52
3	SLM SP	43	31	0.98	44	3.1	80	22	7.6		3.7	3	5	5.6		299	99	8.3	6.7	120	100	34	17	52
CLNEY																								
1	MID LT SP	32	31	0.94	46	5.2	92	20	7.3	LANKART 57	2.8	2	3	6.1	80 PERCENT	270	87	6.6	5.6	120	110	19	9	42
RULE																								
2	SLM LT SP	42	31	0.96	43	4.5	89	21	6.5	LANKART LX571	3.0	3	3	6.6	100 PERCENT	272	83	6.1	5.4	110	110	21	10	41
3	SLM LT SP	42	31	0.95	44	4.4	87	21	6.3		3.4	2	3	6.8		268	87	6.4	5.5	130	100	22	10	40
SILVERTON																								
2	LM SP	53	31	0.95	44	2.6	81	21	7.2	PAYMASTER 18	4.6	5	7	7.9	95 PERCENT	297	93	8.5	7.3	100	80	77	42	49
TULIA																								
3	SLM LT SP	42	30	0.87	46	4.0	90	21	7.2	STRIPPER 31	4.0	3	5	7.8	90 PERCENT	278	90	7.2	5.8	120	120	19	12	38
VERNON																								
1	SLM LT SP	42	30	0.91	46	5.0	84	20	6.7	LANKART 57	3.3	3	3	7.7	100 PERCENT	248	77	6.5	5.4	130	100	20	8	33
2	SLM LT SP	42	31	0.92	45	5.1	88	20	6.4		3.0	2	3	6.1		274	88	6.3	5.6	130	110	20	10	40
3	SLM LT SP	42	31	0.99	46	4.9	85	20	7.7		3.1	2	4	6.5		273	86	6.3	5.7	130	110	20	9	39
OKLAHOMA																								
GRANDFIELD																								
3	SLM LT SP	42	31	0.97	46	5.3	84	22	7.0	LANKART 57	4.5	2	3	6.8	95 PERCENT	272	91	6.8	5.9	130	110	21	11	41
1/ Reduced from 42 because of bark																								
2/ Reduced from 33 because of bark																								
3/ Reduced from 43 because of bark																								

1/ Reduced from 42 because of bark

2/ Reduced from 33 because of bark

3/ Reduced from 43 because of bark

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Name & Code	Stple	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Strength	Elongation	Appearance Index		Imprfct'ns		Spin. Potent-ial			
				2.5% span	Unif.		Zero	1/8" Gage			Gra	Yel				22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx		27 tx	50s or 12 tx	
SOUTH CENTRAL AREA																							
MISSISSIPPI																							
WATER VALLEY																							
4 LM	51	33	0.99	42	3.1	79	22	7.2	16	5.2	2	2	2	7.4	100	31	6.4	5.1	70	60	35	29	47
90 PERCENT																							
TENNESSEE																							
BRADEN																							
4 SLM LT SP	42	33	1.03	44	4.2	80	22	7.2	16	3.0	2	3	3	6.1	101	32	6.3	4.4	100	80	17	12	50
95 PERCENT																							
MCLEMORESVILLE																							
3 SLM SP	43	33	1.05	43	4.0	85	22	7.6	25	2.4	3	5	5	5.7	110	36	6.5	4.8	100	70	16	12	64
80 PERCENT																							
SOUTHEAST AREA																							
ALABAMA																							
MCUNDVILLE																							
3 LM	51	34	1.10	44	3.8	80	23	7.1	201	2.9	2	3	3	5.4	108	35	6.2	4.3	90	70	29	20	60
80 PERCENT																							
PRATTVILLE																							
3 SLM	41	35	1.10	44	4.6	91	24	5.6	417	2.4	1	3	3	4.2	117	39	5.6	4.3	100	70	15	14	63
95 PERCENT																							
GEORGIA																							
SHELLMAN																							
3 SLM LT SP	42	34	1.11	44	4.8	78	21	7.9	16	2.2	3	3	3	6.3	95	30	6.2	4.3	90	80	16	12	51
70 PERCENT																							
SOUTHWEST AREA																							
NORTHWEST TEXAS																							
HALE CENTER																							
2 SLM SP	43	32	0.95	45	3.4	85	21	7.4	70 PERCENT	3.2	4	6	6	8.1	93	30	6.4	4.3	80	60	29	22	43
3 LM LT SP	52	32	0.95	46	3.6	86	22	7.5	6.4	3.2	3	4	4	8.2	102	33	6.4	4.5	90	70	22	18	45
75 PERCENT																							
LCCP																							
2 SLM	41	32	0.97	46	4.3	84	22	7.3	3.0	1	2	2	2	7.2	99	32	6.1	4.6	90	80	21	17	45
100 PERCENT																							
LUBBOCK																							
2 SLM SP	43	35	1.06	39	3.0	80	23	6.6	312 *	4.2	4	6	6	7.5	101	34	6.4	4.6	70	60	57	52	45
100 PERCENT																							
LUBBOCK																							
2 SLM SP	43	35	1.11	40	3.3	82	24	6.2	5110 *	5.8	4	6	6	8.0	106	35	6.1	4.4	70	60	52	40	51
3 LM SP	53	34	1.09	40	2.9	77	22	7.3	6.7	5.7	3	5	5	8.6	108	35	6.7	4.8	70	60	51	37	50
*100% selected for tests, less than 100% in area																							
1/ Reduced from 33 because of bark																							
2/ Reduced from 42 because of bark																							
3/ Reduced from 43 because of bark																							

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1976--(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade & Code		Stple	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial	
	Name	Code		2.5% span	Unif.		Zero	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx		No
WEST AREA																							
ARIZONA																							
BOWIE																							
2 MID	31	35	1.06	44	4.5	77	20	8.2	2.3	1	3	6.2	94	29	5.9	4.5	90	70	20	18	46		
3 MID	31	34	1.07	44	4.6	83	20	7.4	2.1	0	3	6.1	94	29	6.2	4.0	90	70	16	12	51		
CASA GRANDE																							
3 SLM	41	35	1.08	44	4.2	81	22	7.7	2.2	1	2	6.4	100	33	6.2	4.5	90	70	19	15	53		
GILA BEND																							
3 SLM	41	34	1.04	44	4.8	85	21	5.9	2.6	2	3	7.5	91	27	5.3	3.8	90	70	17	14	41		
RCLL																							
3 MID	31	35	1.09	45	5.1	85	23	6.6	1.7	1	3	6.7	96	30	5.5	4.0	90	70	22	17	45		
WENDEN																							
3 SM	21	35	1.11	44	4.4	82	22	8.2	1.5	0	2	5.6	103	33	6.5	4.7	90	70	14	11	55		
CALIFORNIA																							
CARUTHERS																							
1 SLM PLUS	40	36	1.11	45	4.0	97	27	5.7	2.0	1	3	5.8	133	47	6.3	4.8	90	70	22	22	76		
3 LM	51	36	1.12	45	3.8	93	27	5.4	2.9	2	2	5.8	130	45	5.7	4.5	90	80	17	15	78		
FIREBAUGH																							
1 MID	31	36	1.12	45	4.2	91	27	6.1	1.7	1	3	5.3	125	44	5.8	4.8	80	70	18	17	72		
FIVE POINTS																							
3 SLM	41	36	1.14	47	4.3	90	27	6.6	3.0	2	3	6.4	126	45	5.8	4.6	80	70	19	15	78		
HUFON																							
3 SLM	41	36	1.15	46	3.7	87	26	6.6	3.2	1	2	5.4	133	47	6.1	5.2	80	70	20	14	79		
LOST HILLS																							
3 SLM	41	35	1.12	45	3.8	89	25	6.1	2.7	1	2	5.8	123	42	5.3	4.6	80	70	22	15	73		
SHAFTER																							
3 SLM	41	35	1.12	45	3.7	89	26	6.2	2.2	2	3	5.9	126	44	6.4	4.7	70	60	28	23	76		
WESTMORLAND																							
2 MID	31	35	1.06	44	4.8	84	23	6.6	2.0	0	2	5.8	99	32	5.4	3.9	80	70	22	17	47		

1/ Reduced from 41 because of grass

1/ Reduced from 41 because of grass

Table 4--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns													
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint		Color Raw Stock		P & C and Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial				
				2.5% span	Unif.		Zero Gage	1/8" Gage		Pct	Pct	Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx					
				Name & Code	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No		No	No		
SOUTHEAST AREA																											
ALABAMA																											
ALBERTA																											
41	34		1.10	45	4.6	79	24	COKER 310	7.7	2.2	1	2	6.4		95 PERCENT	102	35	6.1	4.6	120	80	11	10	57			
												*	16.6			123	43	6.3	5.3	120	110	6	5				
WEST AREA																											
NEW MEXICO																											
TULAROSA																											
41	37		1.18	47	3.5	84	26	ACALA 1517-V	6.7	4.0	0	2	7.7		96 PERCENT	143	53	6.3	5.0	80	70	37	28	109			
												*	12.7			165	61	6.8	5.6	90	90	20	15				
50	37		1.19	45	3.3	90	29		6.2	5.7	1	2	14.4			146	54	6.5	5.6	70	60	60	43	111			
												*	14.2			176	66	7.5	6.3	90	70	25	20				
WEST TEXAS																											
CLINT																											
41	36		1.18	45	3.5	85	26	ACALA 1517-70	6.1	3.6	1	2	7.8		90 PERCENT	139	52	6.5	5.4	100	70	19	14	97			
												*	13.7			161	59	6.6	5.4	100	90	8	8				
50	36		1.19	44	2.8	87	29		6.4	3.6	1	1	9.4			143	55	6.5	5.5	80	60	31	23	105			
												*	14.5			164	60	6.3	5.7	90	70	17	14				

* Comber Waste and Combed Yarn Data

Table 5 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Combed Yarns											
No	Grade	Stple	32s	Array Length		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns				
				UQL	CV		Zero	1/8" Gage			Gra	Yel			Lbs	Lbs	Pct	Pct	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	
AREA																									
WEST																									
ARIZONA																									
2	3	46		1.58	31	3.9	105	PIMA S-5		7.1	2.9	3	6	6.6	100 PERCENT	15.9	65	34	5.5	4.6	110	110	1	1	
3	4	46		1.52	31	3.9	102	PIMA S-5		7.9	3.4	4	5	7.0	93 PERCENT	15.5	66	35	5.5	4.5	120	110	2	1	
2	4	44		1.44	33	3.6	103	PIMA S-5		7.1	3.0	4	5	7.4	100 PERCENT	17.9	66	35	5.4	4.4	110	100	2	1	
3	3	44		1.47	30	3.5	99	PIMA S-5		7.8	2.2	3	5	6.6	94 PERCENT	16.0	67	35	5.6	4.7	120	110	2	1	
3	4	44		1.43	32	3.0	104	PIMA S-4		7.1	4.2	4	5	7.2	85 PERCENT	17.9	67	36	5.6	4.9	110	90	3	4	
3	3	46		1.50	29	3.3	102	PIMA S-5		7.6	1.7	3	5	6.2	100 PERCENT	16.7	69	37	5.7	4.7	100	100	2	2	